

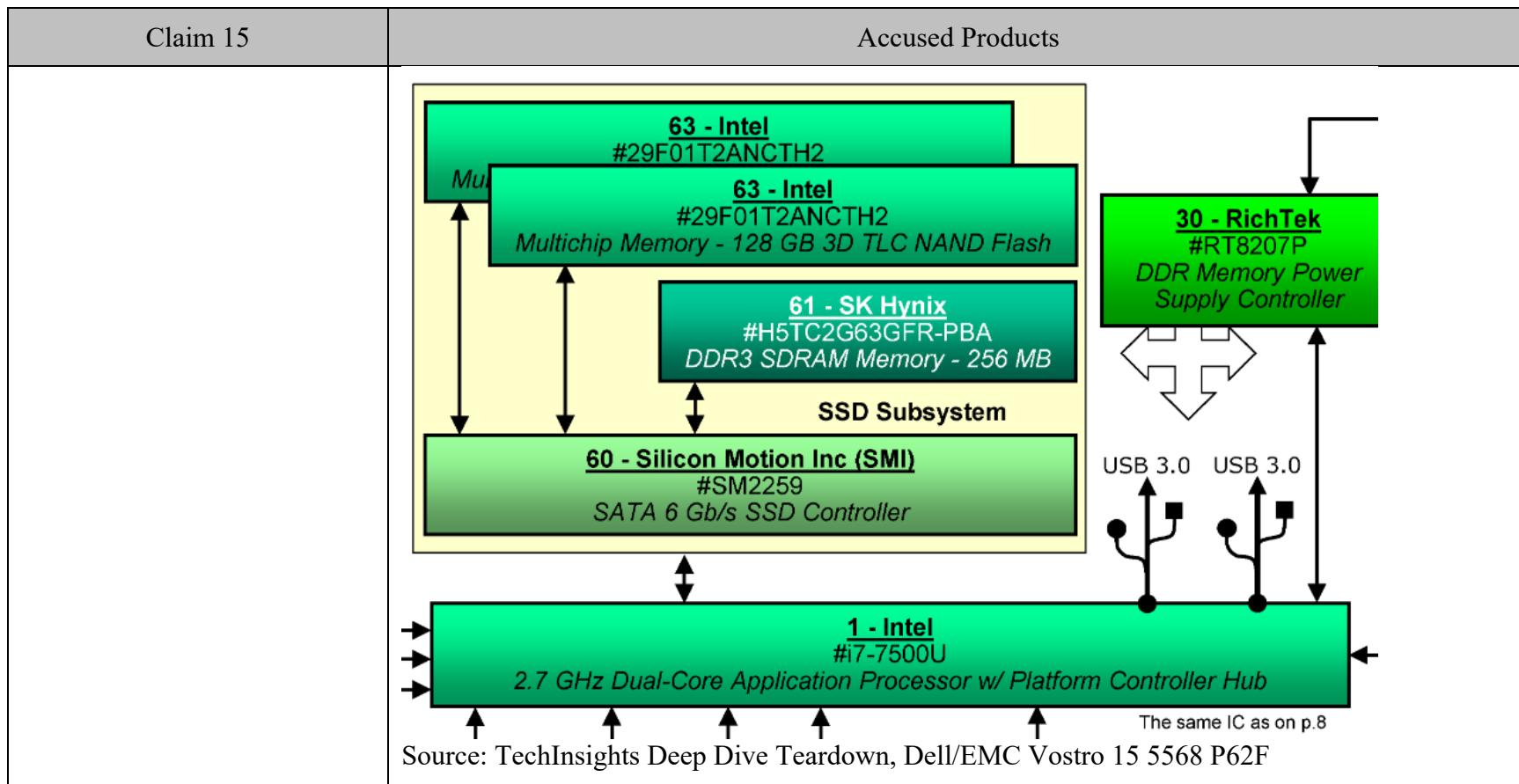
Exhibit 4

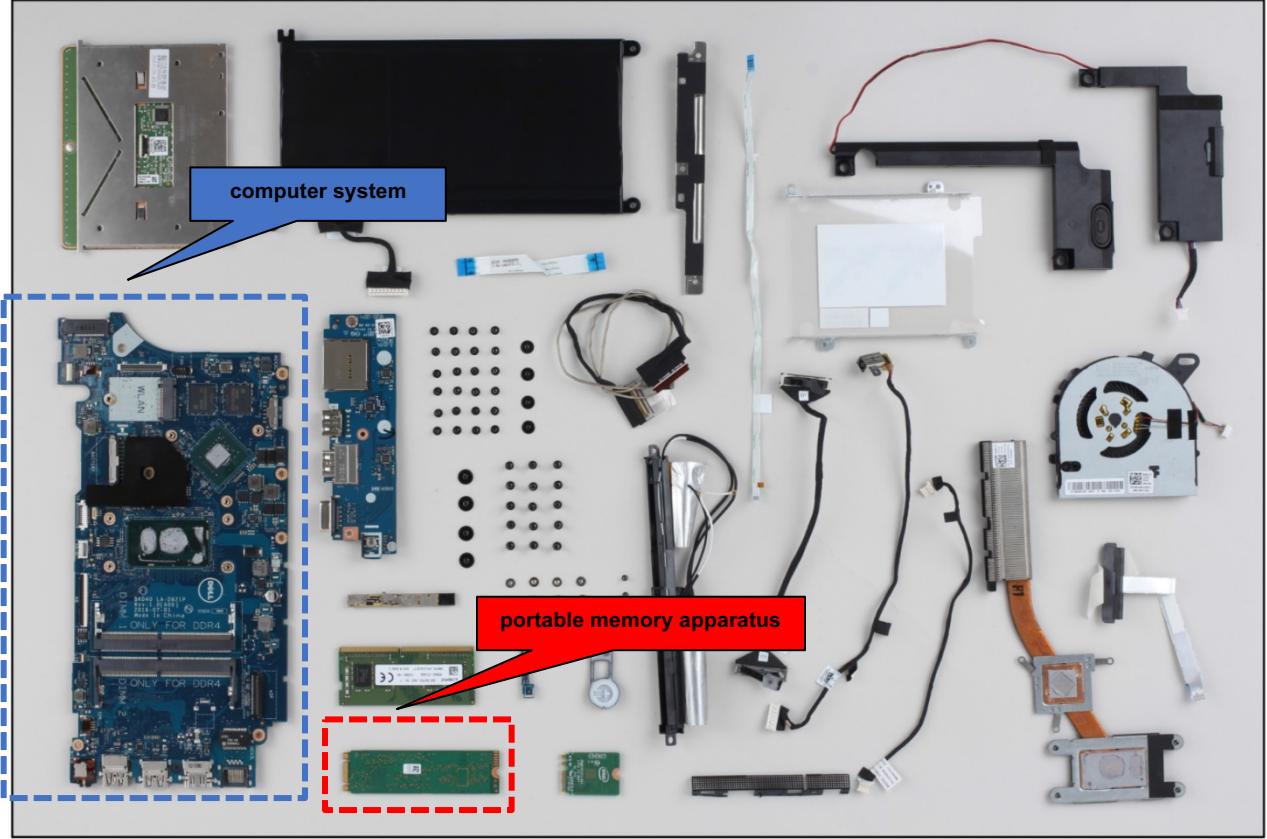
U.S. Patent No. 6,920,527 (“527 Patent”)**Accused Products**

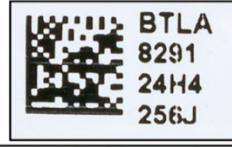
Dell/EMC products with SSDs including Silicon Motion SSD Controllers, including without limitation the Dell/EMC Vostro 15 5568 P62F (“Accused Products”), infringe at least Claim 15 of the ’527 Patent.

Claim 15

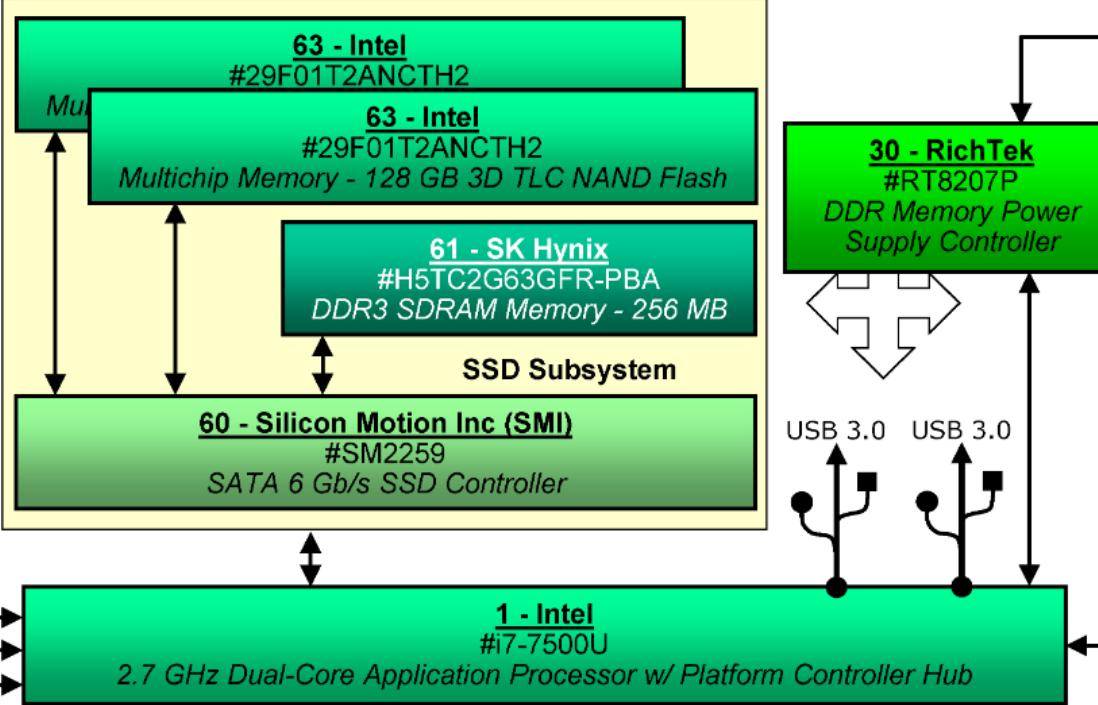
Claim 15	Accused Products
[15pre]. A method, comprising:	To the extent the preamble is limiting, each Accused Product practices the claimed method. <i>See limitations [15a]-[15d] below.</i>
[15a] coupling a portable memory apparatus to a computer system, wherein said portable memory apparatus comprises a memory controller chip, a non-volatile memory, and a volatile memory;	Each Accused Product performs coupling a portable memory apparatus to a computer system, wherein said portable memory apparatus comprises a memory controller chip, a non-volatile memory, and a volatile memory. For example, the Dell/EMC Vostro 15 5568 P62F couples an Intel SSDSCKKF256GB SSD to a computer system. The SSD in part comprises a Silicon Motion Inc SM2259 memory controller, an Intel 29F01T2ANCTH2 3D TLC NAND Flash array, and an SK Hynix H5TC2G63GFR-PBA DDR3 SDRAM volatile memory array. <i>See, e.g.:</i>

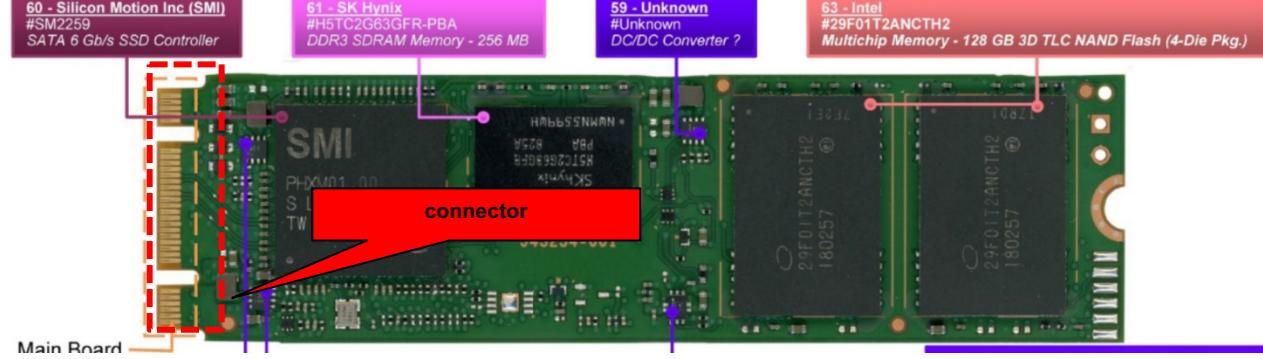
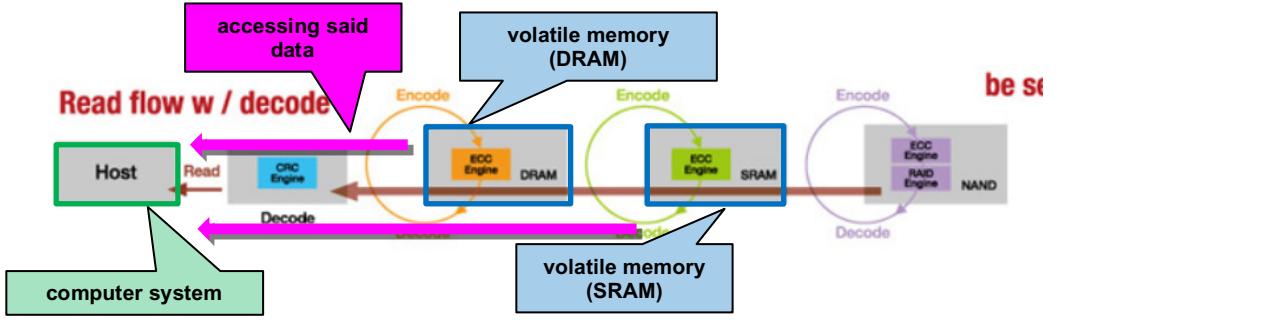


Claim 15	Accused Products
	 <p data-bbox="635 1116 1628 1155">Source: TechInsights Deep Dive Teardown, Dell/EMC Vostro 15 5568 P62F</p>

Claim 15	Accused Products																								
	<p>Two photographs of an M.2 SSD module. The left image shows the green printed circuit board (PCB) with the Intel SSD chip and various components. The right image shows the assembled M.2 module with a white heatsink and a black plastic cover.</p> <table border="1" data-bbox="1220 266 1812 507"> <thead> <tr> <th colspan="2" data-bbox="1453 274 1600 295">SSD Subsystem</th> </tr> </thead> <tbody> <tr> <td>Brand</td><td>Intel</td></tr> <tr> <td>Part Number</td><td>SSDSCKKF256GB</td></tr> <tr> <td>Module Dimensions</td><td>80 x 22 x 1.95</td></tr> <tr> <td>Weight (grams)</td><td>5.62</td></tr> <tr> <td>Estimated Costs</td><td> <table border="1" data-bbox="1453 372 1600 470"> <tr> <td>Electronic Parts</td><td>\$32.72</td></tr> <tr> <td>Non-Electronic Parts</td><td>\$0.07</td></tr> <tr> <td>Assembly</td><td>\$1.07</td></tr> <tr> <td>Test</td><td>\$0.15</td></tr> <tr> <td>Gross Margin</td><td>\$8.50</td></tr> </table> </td></tr> <tr> <td>Estimated Module Price</td><td>\$42.51</td></tr> </tbody> </table> <p>A full Subsystem BOM is provided in the included BOM workbook.</p>   <p>Source: TechInsights Deep Dive Teardown, Dell/EMC Vostro 15 5568 P62F</p>	SSD Subsystem		Brand	Intel	Part Number	SSDSCKKF256GB	Module Dimensions	80 x 22 x 1.95	Weight (grams)	5.62	Estimated Costs	<table border="1" data-bbox="1453 372 1600 470"> <tr> <td>Electronic Parts</td><td>\$32.72</td></tr> <tr> <td>Non-Electronic Parts</td><td>\$0.07</td></tr> <tr> <td>Assembly</td><td>\$1.07</td></tr> <tr> <td>Test</td><td>\$0.15</td></tr> <tr> <td>Gross Margin</td><td>\$8.50</td></tr> </table>	Electronic Parts	\$32.72	Non-Electronic Parts	\$0.07	Assembly	\$1.07	Test	\$0.15	Gross Margin	\$8.50	Estimated Module Price	\$42.51
SSD Subsystem																									
Brand	Intel																								
Part Number	SSDSCKKF256GB																								
Module Dimensions	80 x 22 x 1.95																								
Weight (grams)	5.62																								
Estimated Costs	<table border="1" data-bbox="1453 372 1600 470"> <tr> <td>Electronic Parts</td><td>\$32.72</td></tr> <tr> <td>Non-Electronic Parts</td><td>\$0.07</td></tr> <tr> <td>Assembly</td><td>\$1.07</td></tr> <tr> <td>Test</td><td>\$0.15</td></tr> <tr> <td>Gross Margin</td><td>\$8.50</td></tr> </table>	Electronic Parts	\$32.72	Non-Electronic Parts	\$0.07	Assembly	\$1.07	Test	\$0.15	Gross Margin	\$8.50														
Electronic Parts	\$32.72																								
Non-Electronic Parts	\$0.07																								
Assembly	\$1.07																								
Test	\$0.15																								
Gross Margin	\$8.50																								
Estimated Module Price	\$42.51																								

Claim 15	Accused Products
	<p>Source: TechInsights Deep Dive Teardown, Dell/EMC Vostro 15 5568 P62F</p>
<p>[15b] copying data from said non-volatile memory to said volatile memory using said memory controller chip;</p>	<p>Each Accused Product performs copying data from said non-volatile memory to said volatile memory using said memory controller chip.</p> <p>For example, during a memory read the SM2259 memory controller copies data from the non-volatile NAND flash memory to the volatile memory (SRAM and DRAM).</p> <p><i>See, e.g.:</i></p> <p>Source: http://www.silicomotion.com/A3.2_Overview_Detail.php?sn=1</p>

Claim 15	Accused Products
<p>[15c] accessing said data in said volatile memory using said computer system through a connector coupled to said portable memory apparatus and said memory controller chip; and</p>	<p>Each Accused Product performs accessing said data in said volatile memory using said computer system through a connector coupled to said portable memory apparatus and said memory controller chip.</p> <p>For example, the computer system accesses the data by communicating with the SM2259 SSD controller through the M.2 connector coupled to the SSD and SSD controller.</p> <p><i>See, e.g.:</i></p>  <p>The diagram illustrates the internal architecture of a Dell/EMC Vostro 15 5568 P62F. At the top, two Intel Multichip Memory modules (#29F01T2ANCTH2) are shown, each containing 128 GB of 3D TLC NAND Flash. These are connected to an SK Hynix DDR3 SDRAM Memory module (#H5TC2G63GFR-PBA) which provides 256 MB of memory. This assembly is labeled as the SSD Subsystem. Below the SSD Subsystem is the Silicon Motion Inc (SMI) #SM2259 SATA 6 Gb/s SSD Controller. The Intel i7-7500U processor, which is a 2.7 GHz Dual-Core Application Processor with a Platform Controller Hub, is positioned below the SSD Subsystem. The processor is connected to the SSD controller and to a RichTek DDR Memory Power Supply Controller. Two USB 3.0 ports are located at the bottom of the system. Arrows indicate the flow of data between the components. A note at the bottom right states "The same IC as on p.8".</p> <p>Source: TechInsights Deep Dive Teardown, Dell/EMC Vostro 15 5568 P62F</p>

Claim 15	Accused Products
	 <p>Source: TechInsights Deep Dive Teardown, Dell/EMC Vostro 15 5568 P62F</p>  <p>Source: http://www.siliconmotion.com/A3.2_Overview_Detail.php?sn=1</p>
[15d] updating said non-volatile memory with data from said volatile memory.	<p>Each Accused Product performs updating said non-volatile memory with data from said volatile memory.</p> <p>For example, the SM2259 SSD updates the NAND flash array using the contents of the volatile DRAM and SRAM memories.</p> <p><i>See, e.g.:</i></p>

Claim 15	Accused Products
	<p>Write flow w / encode</p> <p>Source: http://www.siliconmotion.com/A3.2_Overview_Detail.php?sn=1</p>